

BORISYUK, I.D.; DOBROVOL'SKAYA, M.G.

To the level of world standards. Bum. i der. prom. no.123-4 Ja-Mr '65.
(MIRA 18:10)

GENKIN, A.D.; DOBROVOL'SKAYA, M.G.

Find of perovskite in the Sokol'naya lead-zinc deposit (Rudnyy
Altai). Trudy MIn.muz. no.16:90-100 '65.

(MIRA 13:8)

DOBROVOL'SKAYA, N.D.

A new method of processing underground water data collected over
a period of many years. Biul.nauch.-tekhn.inform.VIMS no.1:21-24
'60. (MIRA 15:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii i
inzhenernoy geologii.

(Water, Underground)

DOBROVOL'SKAYA, N.D.

Meaning of the "regime" and "formation" of underground waters.
Trudy VSEGINGEO no.10:205-210 '64.

(MIRA 17:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii
i inzhenernoy geologii.

L 29107-66- EWT(d) IJP(c)

ACC NR: AP6019391

SOURCE CODE: UR/0042/65/020/006/0081/0086

AUTHOR: Dobrowol'skaya, N. M.; Ponomarev, V. A.

ORG: none

TITLE: Pair of counter-operators

SOURCE: Uspekhi matematicheskikh nauk, v. 20, no. 6, 1965, 81-86

TOPIC TAGS: linear operator, mathematics

2 /
B

ABSTRACT: The article solves the following problem posed by I. M. Gel'fand: Let there be two finite-dimensional spaces P and R of arbitrary dimensions and two linear operators A and B, with operator A mapping space P into R and operator B mapping R into P. What is the canonical form of such a pair of counter-operators and what are the necessary and sufficient conditions for the equivalence of two pairs of such operators? It is shown that any pair of counter-operators can be expressed as the direct sum of jointly nilpotent and jointly regular operators. The authors then find separately the canonical form for a pair of jointly nilpotent operators and a pair of jointly regular operators. It is shown that for the equivalence of two pairs of counter-operators it is necessary and sufficient that the nilpotent and invertible parts of both pairs of operators be equivalent. The authors thank I. M. Gel'fand for advice. Orig. art. has: 5 formulas. [JPRS]

SUB CODE: 12 / SUBM DATE: 01Apr65

Card 1/1 CC

S/081/60/000/015/014/014
A006/A001

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 15, p. 589, # 63751

AUTHORS: Dobrovol'skaya, N.N., Provorov, V.N., Kheraskova, Ye.P.

TITLE: The Qualitative Determination of the Rubber Type by the Drop Method

PERIODICAL: V sb.: Metody analiza syr'ya i materialov, primenyayemykh v
rezin. prom-sti, Moscow, 1959, pp. 49-53

TEXT: The Weber test was used (bromination of rubber in CCl_4 solution with subsequent processing by phenol); Na-butadiene rubber produces blue-violet color; butadiene-styrene rubber - yellowish; butyl rubber pale violet; and "nairit" - green color. Fusion of rubbers with Na after dissolution in water makes it possible to identify Cl-containing polymers by the AgCl precipitate after addition of AgNO_3 ; S-containing rubbers by the violet color after addition of Na nitro-prusside solution; N-containing rubbers by the blue color after addition of FeSO_4 and FeCl_3 and heating in the presence of HCl. To detect butadiene-styrene rubbers, the sample is oxidized with HNO_3 reduced to amino-benzoic acid and denitrated in combination with β -naphthol; the fire-red color indicates the presence of styrene. By the first variant of pyrolytic decomposi-

S/081/60/000/015/014/014
A006/A001

The Qualitative Determination of the Rubber Type by the Drop Method

tion the products are collected into a citrate buffer solution with thymol blue (pH 1.2-2.8) or bromothymol blue (pH 6-7.6) indicators. The rubbers are determined using a table of color changes. By the second variant of pyrolytic decomposition the products are absorbed by a n-dimethylaminobenzene solution. Practically both variants are used. The described methods are recommended to be introduced into industrial laboratory practice. ✓

G. Shcherbachev

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

DOBROVOL'SKAYA, N.N.; PROVOROV, V.N.

Identification of the compounding ingredients of rubbers. Trudy
Khim. anal. khim. 13:166-170 '63. (MIRA 165)

1. Nauchno-issledovatel'skiy institut rezhimov i lateksnykh
izdeliy.

(Rubber--Analysis)

DOBROVOL'SKAYA, N.N.; PROVOROV, V.N.; TARADAY, Ye.P.

Identification of accelerators and antiaging agents in rubbers.
Trudy Kom.anal.khim. 13:191-195 '63. (MLRA 16:5)

1. Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh
izdeliy.

(Rubber--Analysis)

7/12
A. A. 1956, p. 3217. The authors study the influence of the temperature cycle upon the vulcanisation of rubber mixes in footwear manufacture, using hot vulcanisation to obtain rubber with solid and with porous structure. 35722

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ДОБРОВОЛ'СКАЯ, Н.С.
DOBROVOL'SKAYA, N.S.

Using the method of internal pressure in shaping and vulcanizing
footwear undersides made of rubber. Leg. prom. 17 no.12:16-18
D '57. (MIRA 11:1)

(Boots and shoes, Rubber)

DOBROVOL'SKAYA, N.S., inzh.

Using internal pressure method in forming porous rubber parts by
vulcanization directly on shoes. Nauch.-issl. trudy TSNIKP no.28:
100-119 '57. (MIRA 11:10)
(Boots and shoes, Rubber)

DOBROVOL'SKAYA, N. S., Candidate Tech Sci (diss) -- "Investigation of the process of forming rubber parts when they are culcanized on footwear". Moscow, 1959. 11 pp (Min Higher Educ USSR, Moscow Tech Inst of Light Industry), 130 copies (KL, No 26, 1959, 125)

POPOV, M.M.; DOBROVOL'SKAYA, N.S.

Centralize the manufacture of chemical products for the shoe industry. Kozh. obuv. prom. 6 no.6:4-5 Je '64.

(MIRA 17:9)

5(1)

AUTHORS:

Epshteyn, D. A., Tkachenko, N. M., SOV/20-122-5-35/56
Miniovich, M. A., Dobrovol'skaya, N. V.

TITLE:

A Two-Stage Catalyst for Oxidation of Ammonia
(Dvukhstupenchatyy katalizator okisleniya ammiaka)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 5,
pp 874-877 (USSR)

ABSTRACT:

Catalysts for the oxidation of ammonia to nitric oxide can be divided according to their chemical composition into platiniferous and non-platiniferous catalysts. The latter include iron, cobalt, chromium oxides and oxides of other metals. In industry platiniferous catalysts are used almost exclusively, although they are less accessible and more expensive than non-platiniferous ones and involve large irrecoverable losses. But they are stable and guarantee a high degree of transformation of ammonia to nitric oxide (97-98% yield of N_2O). Both groups of catalysts have a great power of selectivity. The question arises as to the conditions under which non-platiniferous catalysts retain their high selectivity without change for a period of time that would meet industrial requirements. The first and second author studied the oxidation

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A Two-Stage Catalyst for Oxidation of Ammonia

SOV/20-122-5-35/56

of ammonia with several non-platiniferous catalysts (Ref 1). Because of various difficulties it was decided to place a standard platinum grid in front of the non-platiniferous catalyst so that the latter contacts a partly reacted mixture. By means of a sight glass it was discovered that the non-platiniferous catalyst, which formerly would hardly glow, soon started to operate again under these conditions. The yield of nitric oxide rose to its original level (98%) and remained there for a long time without dropping: under all other optimum conditions the non-platiniferous catalyst reached stability. It was obvious that the drop of activity and selectivity of the non-platiniferous catalyst was due to a change in its frontal layer, that comes into contact with the new air-ammonia mixture. The great amount of heat created and the ever present poisonous components inactivate the frontal layer. If a platinum grid is used, comparatively little heat is created because of the reduced ammonia concentration and a part of the poison is neutralized by the platinum. The authors have conducted experiments under different conditions and with grids of different densities. The results are given in table 1. From this study the conclusion may be drawn that some non-platiniferous catalysts equal platiniferous catalysts with

Card 2/3

A Two-Stage Catalyst for Oxidation of Ammonia .

SOV/20-122-5-35/56

respect to their selectivity. They possess a higher stability when part of the ammonia was previously oxidized at a platiniferous catalyst. A possible mechanism of reaction had been discussed before (Ref 3). There are 1 table and 3 Soviet references.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti (State Scientific and Planning Research Institute of Nitrogen Industry)

PRESENTED: June 9, 1958, by S. I. Vol'fkovich, Academician

SUBMITTED: June 6, 1958

Card 3/3

I 13104-66		EWT(m)/EWP(t)/EWP(b)		LJP(c)	JD/JG
ACC NR: AP5025794		SOURCE CODE: UR/0363/65/001/009/1564/1565			
AUTHOR: <u>Smol'kov, N. A.</u> ; <u>Dobrovol'skaya, N. V.</u> 4/2 B					
ORG: <u>All-Union Scientific Research Institute of Mineral Raw Materials</u> (Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya)					
TITLE: Magnetic susceptibility of <u>lanthanum</u> , <u>neodymium</u> , and <u>gadolinium</u> oxides 27 27 27 27					
SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 9, 1954, 1564-1565					
TOPIC TAGS: lanthanum oxide, neodymium oxide, gadolinium oxide, mag- netic susceptibility, paramagnetism, diamagnetism, magnetic moment					
ABSTRACT: The magnetic susceptibility χ of the oxides La_2O_3 , Nd_2O_3 , and Gd_2O_3 was measured by the Faraday method at temperatures of 20-800°C. La_2O_3 has a constant diamagnetic susceptibility $\chi_{\text{diam}} = -0.23 \cdot 10^{-6} \text{ cm}^3$ g^{-1} over the entire temperature range. Nd_2O_3 is paramagnetic but its temperature dependence deviates from the Curie-Weiss law particularly at high temperatures; this is due to the effect of the energy levels of the lower multiplet which are located above the ground state $^4I_{9/2}$ and					
Card 1/2		UDC: 546.65'221			

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ACC NR: AP5025794

whose contribution to the paramagnetism increases with T . The experimental effective magnetic moment of the Nd^{3+} ion is (in Bohr magnetons) $\mu_{\text{eff}} = 3.79$ (theoretical value 3.62) for the free ion and 3.67 for the interacting ion. The susceptibility of Gd_2O_3 conforms rigorously the Curie-Weiss law because the paramagnetism of Gd^{3+} is due solely to the magnetic moment of the ion in the ground state $^8S_{7/2}$. $\chi_{\text{para}} = 140 \cdot 10^{-6} \text{ cm}^3 \text{ g}^{-1}$ at 20°C . Experimental μ_{eff} for Gd^{3+} (in Bohr magnetons) is 7.95 (theoretical value 7.94). Orig. art. has: 2 figures, 1 formula.

SUB CODE: 07/ SUBM DATE: 16Apr65/ ORIG REF: 000/ OTH REF: 002

20/

Cord 2/2

DOBROVOL'SKAYA, R.; NAGORNAYA, S.

Exhibition and sale in a workers' settlement. Sov. torg 33 no.10:
24-25 0 '59. (MIRA 13:1)

1.Starshiy inspektor otdela organizatsii trgovli univernaga, g.Gor'kiy
(for Dobrovol'skaya). 2.Starshiy tovaroved otdela tekstil'nykh tovarov
univernaga, g.Gor'kiy (for Nagornaya).
(Gorkiy--Department stores)

YEFIMOVA, A.A., kand.med.nauk; DOBROVOL'SKAYA, R.A.

Intracutaneous vaccination of neonates and infants with BCG.
Probl.tub. no.1:26-32 '62. (MIRA 15:8)

1. Iz tuberkuleznogo otdeleniya (zav. - prof. I.V. TSimbler)
Instituta pediatrii AMN SSSR (dir. - dotsent M.Ya. Studenikin).
(BCG VACCINATION)

ASEYEVA, I.V.; DOBROVOL'SKAYA, T.G.

Biosynthesis of free amino acids by mycobacteria and nonspore-forming bacteria from the soils of Pamirs. Nauch. dokl. vys. shkoly; biol. nauki no.2:181-184 '65.

(MIRA 18:5)

1. Rekomendovana kafedroy biologii pochv Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.

DOBROVOL'SKAYA, T.I.

Clinical aspects and therapy of lupus erythematosus disseminatus.
Sov.med. 18 no.1:20-22 Ja '54. (MLRA 7:1)

1. Iz propedevticheskoy terapevticheskoy kliniki (zaveduyushchiy -
professor A.A.Shelagurov) II Moskovskogo meditsinskogo instituta
im. I.V.Stalina. (Lupus)

DOEROVOL'SKAYA, T.I., kandidat meditsinskikh nauk, (Moskva)

~~reproduction of this document is prohibited~~

The quality of diagnosis in internal diseases. Klin. med. 33 no.10:
3-9 0 '55. (MIRA 9:2)

1. Iz kafedry propedevtiki ^{internal} vnutrennikh bolezney (zav.--prof. A.A. Shelagurov) lechebnogo fakul'teta II Moskovskogo meditsinskogo instituta imeni I.V. Stalina.

(DIAGNOSIS,

importance of correct diag. in internal dis. & analysis of errors)

(MEDICINE, INTERNAL

diag. importance of correct diag. & analysis of errors)

DOBROVOL'SKAYA, T.I.; VASIL'YEV, P.N.

Two cases of primary atypical amyloidosis. Terap. arkh. 28 no.7:
75-79 '56. (MIRA 10:1)

1. Iz propedevticheskoy terapevticheskoy kliniki (zav. - prof.
A.A. Shelagurov) II Moskovskogo meditsinskogo instituta imeni I.V.
Stalina i prozektury (zav. - P. N. Vasil'yev) 2-y gorodskoy bol'nitsy
g. Moskvay (glavnyy vrach A. I. Khromova).
(AMYLOIDOSIS, case reports
primary atypical)

DOBROVOL'SKAYA, T.I., kandidat meditsinskikh nauk

Anemia. Med.sestra 16 no.1:3-8 Ja '57.

(MIRA 10:2)

1. Bol'nitsa imeni S.P.Botkina, Moskva.
(ANEMIA)

DOBROVOL'SKAYA T.I.
SHELAGUROV, A.A., prof.; DOBROVOL'SKAYA, T.I. (Moskva)

Out-patient care of convalescents following infectious hepatitis.
Klin.med. 35 no.8:119-125 Ag '57. (MIRA 10:11)

1. Iz propedevticheskoy terapevticheskoy kliniki (zav. - prof. A.A. Shelagurov) II Moskovskogo meditsinskogo instituta.
(HEPATITIS, INFECTIOUS, ther.
out-patient care of convalescents)
(CONVALESCENCE
after infect. hepatitis, out-patient care)

^{Vol.}
DOBROVOL'SKAYA, T.I. (Moskva)

"Botkin's disease (epidemic hepatitis." Reviewed by T.I. Dobrovolskaia. Klin.med. 37 no.1:160-164 Ja '59. (MIRA 12:3)
(HEPATITIS, INFECTIOUS)

DOBROVOL'SKAYA, T.I.

Functional state of the liver and pancreas in thyrotoxicosis.
Klin.med. 38 no.7:65-73 '60. (MIRA 13:12)
(HYPERTHYROIDISM) (LIVER) (PANCREAS)

DOBROVOL'SKAYA, T.I.; POROSHINA, Yu.A.; KORKINA, M.V.

Toxic encephalopathy developed following insulin intoxication.
Zhur. i nevr. i psikh. 63 no.8:1208-1216 '63.

(MIRA 17:10)

1. Kafedra propedevtiki vnutrennikh bolezney (zav. - prof. A.A. Shelagurov) lechebnogo fakul'teta i kafedra psikhatrii (zav. - prof. O.V. Kerbikov) II Moskovskogo meditsinskogo instituta imeni Pirogova.

SHELAGUROV, Aleksey Alekseyevich; Prinimali uchastiye: ANDRIANOVA, N.V.; DOBROVOL'SKAYA, T.I.; MURASHKO, V.V.; MALINOVSKAYA, N.I.; SEMIN, N.D.; ARTEM'YEV, S.G., red.; MIRONOVA, A.M., tekhn. red.

[Methodology of examination in the clinic for internal diseases] Metody issledovaniia v klinike vnutrennikh boleznei. Izd.2., ispr. i dop. Moskva, Izd-vo "Meditsina," 1964. 474 p. (MIRA 17:3)

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VYALOV, O.S.; GORBACH, L.P. [Horbach, L.P.]; DOBROVOL'SKAYA, T.I.
[Dobrovol's'ka, T.I.]

Fossil star-shaped prints of the activity of marine organisms in
the eastern Crimea. Geol. zhur. 24 no.4:92-97 '64.

1. Institut geologii i geokhimii goryuchikh iskopayemykh AN
UkrSSR. (MIRA 18:2)

LEBEDINSKIY, V.I.; DOBROVOL'SKAYA, T.I.

New data on the crystalline foundation of the Black Sea Lowland.
Sov. geol. 2 no.8:149-151 Ag '59.

1. Institut mineral'nykh resursov AN USSR i Krymskaya kompleksnaya ekspeditsiya tresta "Ukrneftegasrazvedka".
(Black Sea Lowland--Rocks, Crystalline and metamorphic)

DOBROVOL'SKAYA, T.I.; SAL'MAN, G.B.

Hauterivian-Barremian conglomerates of the eastern Crimea.

Dokl.AN SSSR 133 no.6:1405-1408 Ag '60.

(MIRA 13:8)

1. Kontora bureniya "Kryumneftegasrazvedka" goroda
Feodosii. Predstavleno akad. M.S.Shatskim.
(Crimea--Conglomerate)

LEBEDINSKIY, V.I.; DOBROVOL'SKAYA, T.I.

Recent data on lower Cretaceous volcanism in the Crimean Mountains.
Dokl. AN SSSR 136 no.4:896-899 F '61. (MIRA 14:1)

1. Institut mineral'nykh resursov AN USSR. Predstavleno akademikom
V.S. Sobolevym.
(Crimea--Volcanic ash, tuff, etc.)

SHELAGUROV, A.A., prof.; DOBROVOL'SKAYA, T.I., dotsent; IL'IN, D.P.

Hospitalization and treatment of patients with myocardial
infarction complicated by collapse. Klin. med. 40 no.11:
62-68 N°62 (MIRA 16:12)

1. Iz kafedry propedevtiki vnutrennikh bolezney (zav. - prof.
A.A.Shelagurov) lechebnogo fakul'teta II Moskovskogo meditsin-
skogo instituta imeni N.I.Pirogova.

DOBROVOL'SKAYA, T.I.; SNEGIREVA, O.V.

Conglomerates of the Bitak series of the Crimea. Dokl. AN SSSR
143 no.6:1417-1420 Ap '62. (MIRA 15:4)

1. Institut mineral'nykh resursov AN USSR i Vsesoyuznyy
nauchno-issledovatel'skiy institut prirodnogo gaza. Predstavleno
akademikom V.S.Sobolevym.
(Crimea---Conglomerate)

GORBACH, L.P.; DOBROVOL'SKAYA, T.I.

Lower Cretaceous paleoseismic phenomena in the Crimea.
Dokl. AN SSSR 154 no. 3:590-591 Ja '64. (MIRA 17:5)

1. Predstavleno akademikom V.S.Sobolevym.

DOBROVOL'SKAYA, T.I.

Lithological characteristics of Lias conglomerates in the Yalta
region. *Biul. MOIP. Otd. geol.* 39 no.1:125-131 Jan-F '64. (MIRA 18:4)

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 66 (USSR) SOV/137-58-11-22314

AUTHORS: Nadzvetskiy, Yu. E., Dobrovol'skaya, V. I., Ratnikov, D. G.

TITLE: Energy Relationships in Floating-zone Refining of Silicon by Induction
(Energeticheskiye sootnosheniya pri induktsionnoy zonnoy plavke kremniya)

PERIODICAL: V sb.: Prom. primeneniye tokov vysokoy chastoty. Riga, 1957, pp 84-90

ABSTRACT: A calculation of the power required to fuse and heat Si from the cold state and a method for the choice of inductor dimensions are presented. It is found that to maintain a zone 1 cm thick in the fused condition in a Si bar 1 cm in diameter ~ 400 w power is required. It is observed that an increase in inductor diameter causes a more uniform current distribution in the rod and an increase in the width of the zone of heating, while change in inductor height has little influence upon the current distribution in the Si rod. When the inductor is 2 cm in diameter and the rod is 1 cm, the minimum frequency required to heat the Si ranges from ~ 2 mc at a resistivity of 1 ohm·cm to ~ 100 mc at 500 ohm·cm. Yu. Sh.

Card 1/1

S/137/62/000/004/050/201
A006/A101

AUTHORS: Ratnikov, D.G.; Dobrovol'skaya, V.I.; Nedzvetskiy, Yu.E.

TITLE: Heat problems in zonal melting without crucibles

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 4, 1962, 46 - 47, abstract 4G315 (V sb. "Prom. primeneniye tokov vysokoy chastoty v elektrotermii", Moscow-Leningrad, Mashgiz, 1961, 124 - 129)

TEXT: The authors calculated the power necessary to produce the molten zone, assuming that this power is dissipated from the surface of the melt and the sections of the solid rod located near the zone. The total power is equal to (1)

$$P = \pi D (\sigma HT_0^4 + \sqrt{2 \sigma \lambda D T_0^5 / 5}),$$

where D is the rod diameter, T is the absolute surface temperature, σ is the emissivity of the material, λ is the coefficient of heat conductivity. The superposition of displacement rate of the zone, v, entails some modification of the basic equation. For zonal melting of Si with D = 3 cm, a calculation is presented which shows that in this case additional power ΔP is consumed. At v = 1, 3

Heat problems in zonal melting without crucibles

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A006/A101

and 10 mm/min, ΔP is respectively: 3.1, 26.2 and 212 watt. The total power calculated by formula (1) for this case is 1,900 watt. Temperature distribution in the rod is calculated and experimental results on the effect of various factors upon the crystallization front in zonal melting are given. It is shown that at a zone height which is approximately equal to the diameter of the Si rod, melting proceeds at a plane crystallization front. The height of the zone can be reduced, with simultaneous maintaining of the plane front, by intensified cooling of the rod. It was revealed by experiments that in the case of a narrow induction coil a lesser zone height than in the case of a high induction coil is required for through-fusion of the ingot or the production of a plane crystallization front. It is expedient to use narrow induction coils and to operate with least permissible gaps. ✓

B. Golovin

[Abstracter's note: Complete translation]

Card 2/2

L 41315-65 EWT(t)/EWP(t)/EWP(b)---JD -
ACCESSION NR: AT-0007/94

S/3117/60/000/01-/0186 0190

AUTHOR: [unclear] [unclear] E. (Engineer); [unclear] [unclear] [unclear]

TITLE: [unclear] the stability of the zone during [unclear]

[unclear] [unclear] [unclear] [unclear] [unclear] [unclear]
Trudy, [unclear] [unclear] [unclear] [unclear]

1. [unclear] [unclear] [unclear] [unclear] [unclear] [unclear]
melting, zone melting, zone stability, structural [unclear]

ABSTRACT: The stability of the melted zone during vertical [unclear]
determined the critical bed at limit of the [unclear] [unclear]
the [unclear] [unclear] [unclear] [unclear] [unclear] [unclear]
[unclear] [unclear] [unclear] [unclear] [unclear] [unclear]

[unclear] [unclear] [unclear] [unclear] [unclear] [unclear]
[unclear] [unclear] [unclear] [unclear] [unclear] [unclear]
[unclear] [unclear] [unclear] [unclear] [unclear] [unclear]
static pressure along the vertical axis [unclear] [unclear]

Card 1/3

- L 41315-65

ACCESSION NR: AT4047594

[illegible]

Card 2/3

L 41315-65

ACCESSION NR: AT4047394

ASSOCIATION: Nauchno-issledovatel'skiy institut tokov vysokoy chastoty
(Scientific Research Institute of High-Frequency Currents)

SUBMITTED: 00

ENCL: 00

SER: 001

NO REF SOV: 001

OTHER: 001

Card 3/3

GAL'PERIN', Ada Naumovna; DOBROVOL'SKAYA, Valentina Ivanovna;
KELLER, Oleg Konstantinovich; LUBYANITSKIY, Grigoriy
Davidovich; RADCHENKO, L.A., red.

[Small transistorized ultrasonic unit with a 100 watt power
capacity for universal technological use] Malogabaritnaya
ul'trazvukovaya ustanovka moshchnosti 100 vt universal'nogo
tekhnologicheskogo primeneniia na poluprovodnikovyykh triodakh.
Leningrad, 1965. 24 p. (MIRA 18:7)

BIBIKOV, D.N.; PETRUNICHEV, N.N. Prinimali uchastiye; DOBROVOL'SKAYA,
V.K., nauchnyy sotrudnik; PEKHOVICH, A.I., nauchnyy sotrudnik.
SHADIN, G.S., red.; ZABRODINA, A.A., tekhn.red.

[Difficulties caused by ice at hydroelectric power stations;
planning measures for their elimination] Ledovye zatrudneniia
na gidrostantsiakh; proektirovanie meropriiatii po okh ustra-
neniiu. Leningrad, Gos.energ.izd-vo, 1950. 158 p. (MIRA 12:11)
(Hydroelectric power stations) (Ice on rivers, lakes, etc.)

DOBROVOL'SKAYA, V.K.; PEKHOVICH, A.I.

Experimental investigation of the effect of wind waves on ice formation in reservoirs. Meteor. i gidrol. no.10:33-36 O '60.

(MIRA 13:10)

(Ice on rivers, lakes, etc.)

(Waves)

DOBROVOL'SKAYA, V.P.; BARANNIK, V.P.

Effect of the ammonium ions on the corrosion resistance of
copper in hydrochloric acid. Khim. prom. 40 no.11:857-858
N '64 (MIRA 18:2)

NEZNAMOVA, T.G.; DOBROVOL'SKAYA, V.P.; BARANNIK, V.P.

Protective effect of benzotriazole in neutral and acid media.
Ukr. khim. zhur. 31 no. 12:1337-1342 '65 (MIRA 19:1)

1. Sevastopol'skiy priborostroitel'nyy institut. Submitted
August 9, 1963.

L 8899-66 EWP(e)/ENT(m)/EWA(d)/EWP(t)/EWP(z)/EWP(h) JM/WW/WB/WH
 ACC NR: AP5025664 SOURCE CODE: UR/0080/65/038/010/2388/2390
 AUTHOR: Neznamova, T. G.; Dobrovolskaya, V. P.; Barannik, V. P.
 ORG: none
 TITLE: Corrosion inhibiting properties of benztriazole in neutral and acid solutions
 SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 10, 1965, 2388-2390
 TOPIC TAGS: corrosion protection, anticorrosion agent, copper, steel
 ABSTRACT: The purpose of this work was to investigate the inhibition of corrosion of ferrous metals and copper by benztriazole. The corrosion inhibiting properties of benztriazole were investigated on specimens over the course of 10-90 days at 17°C. The rate of corrosion of cast iron and steel as a function of the concentration of benztriazole is shown in fig. 1. The concentration of benztriazole in the amount of 0.001% is quite sufficient to completely prevent the corrosion of copper and 0.5% is sufficient to protect Ni-Resist with spherical graphite. Corrosion of steel and gray iron is retarded 8-10 fold in the course of 30 day testing in 1% benztriazole solution. The use of benztriazole in acids is not practical. In buffered solutions, consisting of benztriazole and its sodium salt (pH = 7.3-7.5), 0.1% solution of buffer mixture reduces the corrosion rate of cast iron and steel to the level where 1% solu-
 UDC: 620.197.3 + 547.77
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ACC NR: AP5025664

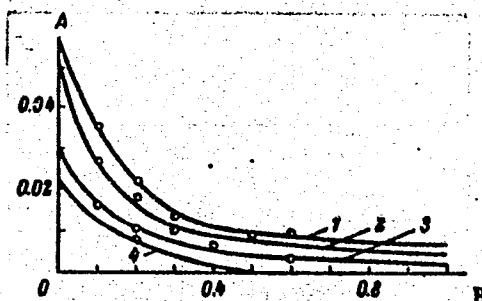


Fig. 1. The rate of corrosion of cast iron and steel as a function of the concentration of benzotriazole. A--rate of corrosion (g/m^2 , hr); B--concentration of inhibitor (%); 1--gray iron; 2--steel; 3--Ni-Resist with plate-like graphite; 4--Ni Resist with spherical graphite.

tion of benzotriazole alone was required. Thus, on the basis of the apparent efficiency of buffered solutions, their use is recommended in closed water circulating systems where steel and copper parts are in contact. Orig. art. has: 4 figures.

SUB CODE: 11/

SUBM DATE: 22Jun64/

ORIG REF: 000/

OTH REF: 002

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Card 2/2

L 36178-66 EWT(m)/EWP(j)/T/EWP(t)/ETI IJP(c) RM/WB/WH/JD

ACC NR: AP6014269

(N)

SOURCE CODE: UR/0153/66/009/001/0144/0147

AUTHOR: Dobrovol'skaya, V. P.; Neznamova, T. G.; Barannik, V. P.ORG: Sevastopol' Instrumentation Institute (Sevastopol'skiy priborostroitel'nyy institut)TITLE: 8-Mercaptoquinoline and 8-hydroxyquinoline as corrosion inhibitors for steel, cast iron and copper in acid media in the presence of ammonium ions

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 9, no. 1, 1966, 144-147

TOPIC TAGS: corrosion inhibitor, steel, copper, cast iron, ammonium salt

ABSTRACT: The paper constitutes the first stage of a study of the anticorrosive action of compounds having the common property of forming chelates with metal ions. The effect of 8-hydroxyquinoline (which forms a chelate with Cu^{2+} ions only at pH 5.33-14, i. e., the chelate does not exist in acid media) and 8-mercaptoquinoline (which forms insoluble compounds with Cu^{2+} in acid media) on the corrosion of M-1 copper, St-3 steel, several types of cast iron, and steel in contact with electrolytic copper was investigated in the following two electrolytes: 0.5 N HCl + 0.025 N NH_4Cl and 1.0 N H_2SO_4 + 0.025 N $(\text{NH}_4)_2\text{SO}_4$. 8-Mercaptoquinoline was found to inhibit copper corrosion in both of these solutions, and to be particularly effective in HCl, where the corrosion rate decreased by 80-90%; under the same conditions, 8-hydroxyquinoline

UDC: 620.193.01

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ACC NR: AP6014269

has no protective or stimulating effect. Neither of the two inhibitors changed the corrosion rate of cast iron in sulfate solution, but both decreased it slightly in chloride solution. Both have approximately the same protective effect on steel in HCl solution, decreasing the corrosion by a factor of 10. In H₂SO₄ solution, 8-hydroxyquinoline decreases the corrosion by a factor of 4, and 8-mercaptohydroxyquinoline in a concentration of 0.01 and 0.05 mole/l, by a factor of 15-20. The latter inhibitor is effective in the case of steel-copper pairs in HCl solution, but when its concentration is 0.01 and 0.05 mole/l, the copper corrosion increases. 8-Hydroxyquinoline slows down the corrosion of St-3 steel in contact with copper in sulfate and chloride solutions. Orig. art. has: 4 figures and 1 table.

SUB CODE: 13/ SUBM DATE: 30Sep64/ ORIG REF: 005/ OTH REF: 002

L 27108-66 EWT(m)/EWA(d)/ENP(t)/ETI ISP(o) JD/WB

ACC NR: AP6015123

SOURCE CODE: UR/0064/66/000/005/0072/0074

AUTHOR: Dobrovol'skaya, V. P.; Gorobets, A. N.; Barannik, V. P.

ORG: Sevastopol' Instrument Engineering Institute (Sevastopol'skiy priborostroitel'nyy institut)

TITLE: Corrosion of copper in sodium hydroxide and ammonia solutions

SOURCE: Khimicheskaya promyshlennost', no. 5, 1966, 72-74

TOPIC TAGS: corrosion, copper corrosion, sodium hydroxide induced corrosion

ABSTRACT: The corrosion of M-1 electrolytic copper (99.90% min Cu) in a 0.0001—19 g-equiv/l sodium hydroxide solution and in a 0.5 g-equiv/l sodium hydroxide solution containing various amounts of potassium and ammonium sulfates and chlorides has been investigated. It was found that the corrosion rate of copper depends on the concentration of sodium hydroxide. With increasing concentration up to 0.5 g-equiv/l, the corrosion rate increased, but dropped with further increases in concentration. In a sodium hydroxide solution, the potassium salts had little or no effect. Ammonium salts at concentrations up to 0.25 g-equiv/l also had no effect on the corrosion rate,

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UDC: 620.193.42:669.3

L 27108-66

ACC NR: AP6015123

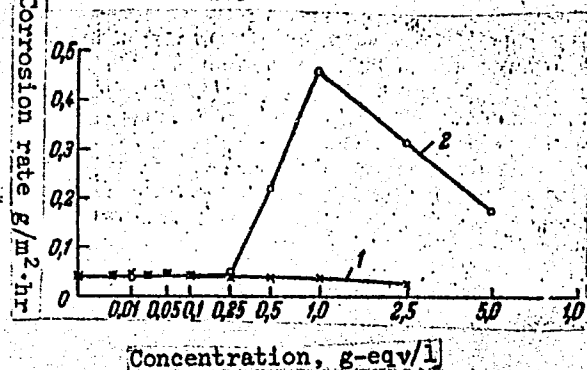


Fig. 1. Dependence of corrosion rate of copper in sodium hydroxide solution on concentration of potassium chloride (1) and ammonia chloride (2).

but the corrosion rate sharply increased with further increases in ammonium salt and then dropped again (see Fig. 1). The copper corrosion in an ammonia solution up to 13.3 g-equiv/l showed a maximum rate at a concentration of 3.5 g-equiv/l. Orig. art. has: 4 figures.

[AZ]

SUB CODE: 11/ SUBM DATE: none/ ATD PRESS: 4258

Card

2/2

ACC NR: AP7006788

SOURCE CODE: UR/0073/66/032/012/1361/1364

AUTHOR: Nezamova, T. G.; Dobrovol'skaya, V. P.; Barannik, V. P.

ORG: Sevastopol' Instrumentation Institute (Sevastopol'skiy priborostroitel'nyy institut)

TITLE: Study of the anticorrosive action of benzothiazole in neutral and acid media

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 32, no. 12, 1966, 1361-1364

TOPIC TAGS: benzothiazole, corrosion inhibitor, anticorrosion additive

ABSTRACT: The effect of the protective properties of benzothiazole and its derivatives on the corrosion of ferrous metals (ferritic steel, gray iron, Ni-Rosist) and copper in a neutral and an acid medium (HCl) was studied at 25°C. The samples were immersed in the solutions for 14 days without stirring. Benzothiazole was found to inhibit the corrosion of ferrous metals most effectively at pH 1, but its protective action was insufficient. It protects copper only when present in low concentrations (0.01-0.2%). Solutions of sodium salt of mercaptobenzothiazole exhibit a protective action and are effective corrosion inhibitors for ferrous metals and copper. The practical applicability of the commercial product Captax (technical grade mercaptobenzothiazole) was demonstrated. Orig. art. has: 5 figures.

SUB CODE: 07/13 SUEM DATE: 09Aug64/ OTH REF: 008

Card 1/1

UDC: 620.197.3+547.77

Ca

7

Determination of small quantities of nitrogen oxides.
V. V. Dobrovolskaya. *Lab. Prakt.* (U. S. S. R.), Sam-
melband, 1939, 93-5; *Chem. Zentr.* 1940, I, 2204.—The
content of oxides of N in the air can be detd. as follows:
Draw the air through 2 wash bottles contg. NaOH and
H₂O₂. After the absorption, heat with Zn dust or De-
varda's alloy, absorb the liberated NH₃ in acid and measure
the color produced with Nessler's reagent. W. A. M.

458-35.4 METALLURGICAL LITERATURE CLASSIFICATION

DOBROVOL'SKAYA, V.V., kandidat meditsinskikh nauk; LIBOV, A.L., direktor; NIKITINA, N.A., glavnyy vrach; DANILEVICH, M.G., professor, nauchnyy rukovoditel'.

Clinical aspect and therapy of dysentery in young children. *Pediatrics* no.3:
14-19 My-Je '53. (MLRA 6:8)

1. Nauchno-issledovatel'skiy pediatricheskiy institut (for Dobrovol'skaya and Libov). 2. Detskaya infektsionnaya bol'nitsa Sverdlovskogo rayona (for Dobrovol'skaya, Nikitina and Danilevich). (Dysentery)

DOBROVOL'SKAYA, V.V.

"Practical manual on industrial sanitary chemistry." M.S. Bykhovskaia
S.L. Ginsburg, O.V. Khalizova. Reviewed by V.V. Dobrovol'skaya.
Gig. 1 san. 21 no.1:61 Ja. '56 (MLRA 9:5)

(SANITARY CHEMISTRY) (BYKHOVSKAYA, M.S.) (GINSBURG, S.L.)
(KHALIZOVA, O.V.)

EXCERPTA MEDICA Sec 7 Vol 13/2 Pediatrics Feb 59

442. DISCHARGE FROM HOSPITAL OF CONVALESCENTS ON COMPLETE RECOVERY AFTER DYSENTERY (Russian text) - Dobrovolskaya V. V. - VOPR. PEDIAT: 1957, 2/1 (70-74)

From the beginning of 1955 convalescents from dysentery were discharged from hospital after their complete recovery. The convalescents were transferred to separate wards with appropriate regimen and were given a suitable diet. Obligatory treatment of all pathological states of non-dysentery aetiology was undertaken, such as anthelmintic and anti-protozoan measures. Physiotherapy was used extensively. No cases of superinfection, dysentery relapses or excretion of bacilli with normal stools were observed. Children who had had acute dysentery first spent 2-3 weeks in the convalescent section and were then examined by a hospital medical board before being sent on to children's establishments. Children who had had chronic dysentery remained in the convalescent section for not less than 1.5-2 months. Of 52 convalescents discharged 44 showed no relapses; there was no information about the other 8. Of 48 children returned to creches 39 remained well and one was readmitted to hospital with a relapse; no information was available about the other 8. Of 18 children who recovered from chronic dysentery 12 are well, one was readmitted with a relapse and no further information was available in the case of 5. (S)

13 Detskoy infektionnoy bol'nitsy Sverdovskogo
rayona Leningrada

DOBROVOL'SKAYA, V.V., kand.med.nauk, DANILOVA, V.A.

Errors in diagnosing dysentery in very young children [with summary
in English]. *Pediatrics* 36 no.5:44-49 My'58 (MIRA 11:6)

1. Iz Detskoy infektsionnoy bol'nitsy Sverdlovskogo rayona
Leningrada (glavnyy vrach N.A. Nikitina) i kafedry detskikh
infektsiy Leningradskogo pediatricheskogo instituta.
(DYSENTERY)

DOBROVOL'SKAYA, V.V.; SHAPIRO, D.S.

Some data on the work of a intestinal diagnostic department.
Pediatriia 38 no.1:12-17 '60. (MIRA 13:10)
(INTESTINES --DISEASES)

BARYSHEVA, A.Ye.; DOBROVOL'SKAYA, V.V.

Prolonged excretion of bacteria after a history of dysentery. Vop.
okh. mat. i det. 7 no.3:25-28 Mr '62. (MIRA 15:5)

1. Iz kafedry infektsionnykh bolezney Leningradskogo pediatricheskogo
meditsinskogo instituta (dir. - Ye.P.Semenova, zav.kafedroy - dotsent
A.T.Kuz'micheva) i detskoy infektsionnoy bol'nitsy (glavnyy vrach -
zasluzhennyy vrach RSFSR N.A.Nikitina) Sverdlovskogo rayona Leningrada.
(DYSENTERY)

DOBROVOL'SKAYA, V.V., kand.med.nauk; SHAPIRO, D.S.

Work of a intestinal diagnostic ward. *Pediatrics* 38 no.4:12-17
Apr '60. (MIRA 16:7)

1. Iz detskoy infektsionnoy bol'nitsy Sverdlovskogo rayona
Leningrada (glavnyy vrach N.A.Nikitina).
(~~LENINGRAD~~-~~INTESTINES~~-~~DISEASES~~)

LYUPAYEV, B.M.; DOBROVOL'SKAYA, V.V.

Using flexible strings in hydraulic construction. Uch. zap.
Mord. gos. un. no.15 pt.2:21-26 '63.

(MIRA 18:6)

DOBROVOLSKAYA, Ye.A.

POLAND / Zooparasitology - Parasitic worms

G

Abs Jour: Ref Zhur - Biol., No 7, 1958, 29114

Author : Ezeranskaya, Dobrovolskaya

Inst : Not given

Title : Immunological Reactions in Echinococcosis.
(Immunologicheskie reaktsii pri ekhinokok-
koze)

Orig Pub: Przegl., epidemiol., 1957, 11, No 2, 139-149

Abstract: RSK [complement fixation reaction] with
antigens in the form of salt extracts from
fresh and dried scolexes and heads of echino-
coccus and cyst fluids, also with lipoidal,
protein and polysaccharide fractions extracted
from scolexes and heads of echinococci, were
found to be non-specific.

Card 1/1

10

KUROCHKINA, Z.V.; SEMENOVA, A.I.; ~~DOBROVOL'SKAYA, Ye.A.~~; USTINOV, Ye.Ye.

Food poisoning caused by a Salmonella typhimurium (Breslau) group.
Zhur. mikrobiol. epid. i immun. 29 no.11:71-73 N '58. (MIRA 12:1)
(SALMONELLA INFECTIONS, in inf. & child,
typhimurium food pois. (Rus))

UTEVSKAYA, S.L., prof. (Khar'kov); DOBROVOL'SKAYA, Ye.I., assistant
(Khar'kov); LICHMAN, G.A., vrach (Khar'kov)

Microflora of the gingival pouches in paradentosis. Probl.
stom. 4:103-109 '58. (MIRA 13:6)
(GUMS--BACTERIOLOGY) (GUMS--DISEASES)

UTEVSKAYA, S.L.; DOBROVOL'SKAYA, Ye.I.; LICHMAN, G.A.

Study of the microflora in pyorrhea alveolaris. Probl. stom. 5:
41-45 '60. (MIRA 15:2)

1. Khar'kovskiy meditsinskiy stomatologicheskiy institut i TSentral'nyy
stomatologicheskaya poliklinika.
(GUMS—DISEASES) (GUMS—MICROBIOLOGY)

L 43589-65 EWT(1)/EWT(m)/T/BEC(b)-2/EWP(t)/EWP(b)/EWA(c) PI-4 IJP(c)
7/2000/62/000/000/0055/0067

35/53
ACCESSION NR: AT0009573

ACCESSION NR: AT0008573

AUTHOR: Demchenko, Ye. R., Zakharin, Ya. A., Mokhir, Ye. P.; Eydel'man, L. G.

AUTHOR Levin, V. Ya. R. Zakharov, R. I.
 TITLE Some factors affecting the energy resolution of scintillation single channel
 1961. Spartak Publ. Soc.

SOURCE: Konferencje o monokrystalach 4th. Tarnov, 1961. Sbornik referatov
VUM, 1962, 65-67

crystal, scintillation activator, thallium activator, sodium

crystal, scintillation activator, and

lead impurities on the scintillation properties were investigated.

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L 43588-65

ACCESSION NR: AT5009573

drop in the light yield of NaI (TL) crystals containing Cu was a decrease in the transport-
of electrons in the crystal lattice.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut monokristallov, Khar'kov
(All-Union Scientific Research Institute of Single Crystals)

SUBMITTED

ENCL 00

SCI 0011

NO REF SOV 001

OTHER: 003

Card

2/2

26737
S/040/61/025/003/014/026
D208/D304

24-4300 1502 1327

AUTHOR: Dobrovol'skaya, Z.N. (Moscow)

TITLE: Wedge penetration into a semi-bounded compressible medium

PERIODICAL: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk. Prikladnaya matematika i mekhanika, v. 25, no. 3, 1961, 485 - 489

TEXT: The problem of the penetration of a thin wedge into a compressible fluid is dealt with by A.Ya. Sagomonyan (Ref. 6: Pronikaniye uzkogo klina v szhymayemuyu zhydkost' (Penetration of a Thin Wedge Into a Compressible Fluid) Vestnik MGU, 1956, 2). In this work the wedge has the angle 2α and penetrates viscous fluid with a constant velocity v_0 which is small, compared with velocity of sound a in the fluid which is assumed to be ideal and weightless. In exact terms, this problem is non-linear and so far unsolved. However, for small v_0 , changes of hydrodynamic properties

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Wedge penetration into a ...

will be small and that makes linearization possible. If at the time $t = 0$ top of the wedge is in contact with free surface, then at any $t > 0$

$$\begin{aligned} u &= u_1(x, y, t) + \dots, & v &= v_1(x, y, t) + \dots \\ p &= p_0 + p_1(x, y, t) + \dots, & \rho &= \rho_0 + \rho_1(x, y, t) + \dots \end{aligned} \quad (1.1)$$

will be true in the region of turbulent motion, bounded by the Mach wave, free surface and surface of the wedge. Here x, y are stationary Cartesian axes with the origin at the point of contact of the wedge with free surface, t = time, p_0 and ρ_0 = pressure and density of the undisturbed fluid. Change of variables $x_1 = x/at$, $y_1 = y/at$ and substitution of Eq. (1.1) into equations describing plane non-stationary motion of ideal compressible fluid gives on elimination of $\bar{u}_1, \bar{v}_1$ and $\bar{\rho}_1$ and linearization

$$(1-x^2) \frac{\partial^2 p}{\partial x^2} - 2xy \frac{\partial^2 p}{\partial x \partial y} + (1-y^2) \frac{\partial^2 p}{\partial y^2} - 2y \frac{\partial p}{\partial y} - 2x \frac{\partial p}{\partial x} = 0 \quad (1.2)$$

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Wedge penetration into a ...

The problem is that of finding a function $p(x, y)$ which would satisfy Eq. (1.2) within ABCD (Fig. 1) and

$$\frac{\partial p}{\partial n} = 0 \text{ in AB, } \frac{\partial p}{\partial y} = 0 \text{ in AD, } p = 0 \text{ in DC, } p = 0 \text{ in BC} \quad (1.3)$$

on the boundary. The Chaplygin transformation

$$r = \frac{2\varepsilon}{1 + \varepsilon^2}, \quad \theta = \operatorname{arctg} \frac{y}{x} \quad (2.1)$$

(note: $\operatorname{arc} \tan \equiv \tan^{-1}$) transforms (1.2) into polar Laplace equation, Fig. 1 into (Fig. 2) and (1.3) into

$$\frac{\partial p}{\partial \eta} = 0 \text{ in AD, } p = 0 \text{ in DC and CB}$$

$$\frac{\partial p}{\partial \xi} [(1 + \xi^2 - \eta^2) \sin \alpha + 2\xi\eta \cos \alpha] + \frac{\partial p}{\partial \eta} [(1 - \xi^2 + \eta^2) \cos \alpha + 2\xi\eta \sin \alpha] = 0 \text{ in BA.}$$

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Wedge penetration into a ...

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Fig. 2 is in turn transformed into (Fig. 3) by

$$w_* = \frac{1}{1 - M^2 \operatorname{tg}^2 \alpha} - \left(\frac{\xi^2 - 1}{\xi^2 + 1} \right)^2 \quad (3.1)$$

and a curve BA into BA in (Fig. 4) by the method of least squares of ordinates which is finally transformed into the upper half of the plane by (Fig. 5) by

$$w = \frac{h\pi}{\pi - \beta} \left[1 - \left(1 - \frac{h}{w_*} \right)^{\frac{\pi}{\pi - \beta}} \right]^{-1}. \quad (3.2)$$

Harmonic function $p(u, v)$ is taken as a real part of $f(w) = p + iq$, analytic in the upper half of w -plane.

$$\begin{aligned} a_1 &= 1, & b_1 &= 0 & (-\infty < u \leq 0) \\ a_1 &= \operatorname{Re} [iw'(\zeta) (e^{-i\alpha} - \zeta^2 e^{i\alpha})] & \text{for} & \zeta = \zeta(u), 0 \leq u \leq u_A \\ b_1 &= -\operatorname{Im} [iw'(\zeta) (e^{-i\alpha} - \zeta^2 e^{i\alpha})] \\ a_1 &= 0, & b_1 &= 1 & (u_A \leq u \leq u_D) \\ a_1 &= 1, & b_1 &= 0 & (u_D \leq u < +\infty) \end{aligned} \quad (4.2)$$

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Wedge penetration into a ...

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is then obtained which represents Hilbert's problem for the upper half plane with singularities. Its solution depends on the singularities; hence as in the present problem

$$J(w) = \int f_1(w) dw$$

is the pressure, $f_1(w)$ should satisfy the following: 1) $f_1(w)$ should be regular in $u > 0$; 2) At the singular points B and D of $a_1(u)$ and $b_1(u)$, $j(w)$ should be bounded; 3) At infinity $j(w) \rightarrow cw^{-1}$; 4) At A singularity of $f_1(w)$ may occur subject to 1^0 and 2^0 . The solution of Hilbert's problem is

$$f_1(w) = \exp\left[\frac{1}{2\pi i} \int_{-\infty}^{+\infty} \operatorname{arctg} \frac{b_1(u)}{a_1(u)} \frac{du}{u-w}\right] iP(w) \left[\prod_n (w-v_n)\right]^{-1} \quad (4.3)$$

where $P(w)$ = polynomial real on the real axis v_n = abscissas of

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S/040/61/025/003/014/026

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Wedge penetration into a ...

singularities of $\text{arc tg}[b_1(u)/a_1(u)]$. Choosing the branches of $\text{arc tg}(b_1/a_1)$ in 1st and 4th quadrant and remembering that at v

$$\omega(u) = \text{arctg}[b_1(u)/a_1(u)]$$

$$\exp\left[\frac{1}{\pi} \int_{-\infty}^{+\infty} \omega(u) \frac{du}{u-w}\right] = (w-v)^{\frac{\omega(v-0) - \omega(v+0)}{\pi}} e^{2i\Phi_0(w)} \quad (4.4)$$

at the point at infinity

$$\exp\left[\frac{1}{\pi} \int_{-\infty}^{+\infty} \omega(u) \frac{du}{u-w}\right] = 1 \quad (4.5)$$

and in the problem in hand

$$-\frac{1}{2} < \frac{\omega(B-0) - \omega(B+0)}{\pi} < 0, \quad -\frac{1}{2} < \frac{\omega(A-0) - \omega(A+0)}{\pi} < 0 \quad (4.6)$$

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Wedge penetration into a ...

$$\frac{\omega(D-0) - \omega(D+0)}{\pi} = \frac{1}{2}, \quad (4.6)$$

the author obtains

$$P(w) = C_1, \quad \prod_n (w - v_n) = (w - u_D)(w - u_A),$$

which together with (4.2) give

$$f_1(w) = iC_1(u_D - w)^{-1/2}(u_A - w)^{-1/2} \times \exp\left\{\frac{i}{\pi} \int_0^{u_A} \arctg \frac{-\operatorname{Im}[i\omega'(\zeta)(e^{-i\alpha} - \zeta^{2\alpha})]_{\zeta=\zeta(w)}}{\operatorname{Re}[i\omega'(\zeta)(e^{-i\alpha} - \zeta^{2\alpha})]_{\zeta=\zeta(w)}} \frac{d\zeta}{\zeta - w}\right\} \quad (4.7)$$

the final expression, where u_A and u_D = abscissas of singularities, A and D_1 and C_1 is given by

$$\frac{C_1 M}{\sin \alpha} \int_{i/\sqrt{2}}^{M(1+\operatorname{ctg} \alpha)^{-1}} \left[\frac{\partial p(x, y)}{\partial x} \sin \alpha + \frac{\partial p(x, y)}{\partial y} \cos \alpha \right]_{x=y=\mu} \frac{d\mu}{\mu} = 1 \quad \left(M = \frac{v_0}{a}\right)$$

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Wedge penetration into a ...

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D203/1304

Pressure is given by $p(u, v) = \operatorname{Re} \int f_1(w) dw$ (A.8). An example is solved by the above method. There are 5 figures and 8 references: 6 Soviet-bloc and 2 non-Soviet-bloc. The reference to the English-language publication reads as follows: S.F. Borgs. Some contributions to the wedge - water entry problem. Journal of the Engineering Mechanics Division Proceedings of the American Society of Civil Engineering Vol. 83 NEM2, Apr. 1957.

SUBMITTED: October 31

8/10

ACCESSION NR: AP4015977

S/0040/63/027/005/0903/0909

AUTHOR: Dobrovol'skaya, Z. N. (Moscow)

TITLE: Nonlinear formulation of some automodel problems on motion of an incompressible fluid with a free surface

SOURCE: Prikl. matem. i mekhan., v. 27, no. 5, 1963, 903-909

TOPIC TAGS: nonlinearity, automodel motion, incompressible, fluid, free surface, nonlinear boundary condition, hydrodynamic variable, infinite wedge, ideal fluid

ABSTRACT: Solution of the problem of fluid motion with a free surface requires satisfaction of a nonlinear boundary condition which must be found in the process of solution. The problem may be sometimes be simplified in the case of automodel motion where the hydrodynamic variables depend on the relations x/t , y/t , z/t . An example of this is the problem of submersion of an infinite wedge in a half-space filled with incompressible fluid. In particular, the author studies submersion with constant velocity of a wedge with arbitrary angle of opening in a half-space filled by an ideal, incompressible, and weightless fluid. For the region with unknown part of the boundary the problem reduces to the determination of one func-

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ACCESSION NR: AP4015977

tion which is analytic in the upper half-plane, subject to a nonlinear boundary condition given on the known boundary--on the entire real axis. Since the obtained boundary value problem is very complicated, the author considers an auxiliary problem of propagation of continuous pressure along the free surface of an incompressible fluid. The wedge penetration problem can be considered as a problem of steady-state fluid motion caused by propagation of continuous pressure along the free surface bounding the fluid. The auxiliary problem also reduces to a nonlinear boundary value problem, and some of its particular solutions can be obtained by an inverse method. The author finds one precise particular solution. Orig. art. has: 5 figures and 40 formulas.

ASSOCIATION: none

SUBMITTED: 18May62

SUB CODE: AI

DATE ACQ: 21Nov63

NO REF SOV: 005

ENCL: 00

OTHER: 004

Card 2/2

DOEROVOL'SKAYA, Z.N.

Nature of the contact of the free surface of a liquid with
a solid boundary in the wedge entry problem. Dokl. AN SSSR
153 no.4:783-786 D '63. (MIRA 17:1)

1. Institut mekhaniki AN SSSR. Predstavleno akademikom
A.A. Dorodnitsynym.

ACC NR: AP6032939

SOURCE CODE: UR/0208/66/006/005/093/0941

AUTHOR: Dobrovol'skaya, Z. N. (Moscow)

ORG: none

TITLE: Numerical solution of the integral equation of a plane self-modeling problem of the motion of a fluid with a free surface

SOURCE: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 6, no. 5, 1966, 934-941

TOPIC TAGS: ~~FLUID SURFACE, ITERATED INTEGRAL, FLUID VELOCITY,~~
~~fluid kinetics, hydrodynamics, wedge body, numeric integration, ~~fluid~~~~

ABSTRACT: The case considered is that of the plane problem of the symmetric penetration (at a constant rate v_0) of a wedge with an arbitrary flare angle $2\alpha_0$ into a half-space occupied by an ideal incompressible and weightless fluid. (cf. Z. N. Dobroval'skaya. V sb. "Prilozheniya teorii funktsiy v mekhanike sploshnoysredy." T. 2, M., Nauka, 1965, 150-170). The attendant motion of the fluid is self-modeling: all the hydrodynamic quantities involved depend on two dimensionless variables: $\xi = x/(v_0 t)$ and $\eta = y/(v_0 t)$ (x, y are Cartesian coordinates whose

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UDC: 517.9:532

ACC NR: AP6032939

origin lies at the point of intersection between the unperturbed surface and the axis of symmetry, t is the time). The flow region whose form changes in the x, y plane in time, corresponds in the ξ, η plane to a fixed, invariant region CABC (Fig. 1). The problem of determining the

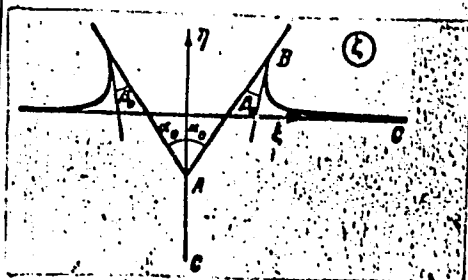


Fig. 1.

motion of the fluid may be formulated as a problem of finding the velocity potential $\Phi(\xi, \eta)$ harmonic in the CABC region, and reduced to the numerical integration and solution of the nonlinear singular integral equation for the real function $f(t)$:

$$f(t) = L(t) - \frac{1}{\pi} \frac{c_0^2}{c^2} \int_0^1 \frac{(1-t)^{-1/2} \exp \left[t \int_0^1 \frac{f(\tau)/\tau}{\tau-t} d\tau \right]}{\int_0^1 t^{-1/2} (1-t)^{-1/2} \exp \left[-t \int_0^1 \frac{f(\tau)/\tau}{\tau-t} d\tau \right] dt} dt \quad (1)$$

$(0 \leq t \leq 1),$

This solution can be constructed by the iteration method. Every time a successive iteration $f_{n+1}(t)$ is derived, all the preceding iterations must satisfy the condition

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ACC NR: AP6032939

$$\frac{1}{4} + a < f_k(1) < \frac{1}{2} + a, \quad k = 0, 1, \dots, n. \quad (2)$$

It is shown that this implies the fundamental possibility of constructing as large a number of iterations as desired. All the calculations were performed with the aid of a Strela computer at the Computer Center of the AS USSR. Orig. art. has: 6 figures, 11 formulas.

SUB CODE: 20, 12 / SUBM DATE: 26May66 / ORIG REF: 001 / OTH REF: 001

Card 3/3

KOVAL', L.O.; DOBROVOL'SKAYA, Z.O. [Dobrovol's'ka, Z.O.]

Comparative characteristics of the effect of acetylcholine and carbocholine on the motor function of isolated sections of the small intestine. Nauk zap. Kyiv. un. 16 no.18:83-88 '57.

(INTESTINES) (CHOLINE)

(MIRA 13:2)

CO

PROCESSES AND PROPERTIES INDEX

Quantitative study of tumor growth in mice treated with extracts of adrenal cortex. N. A. Ikhonovskaya-Zavadskaya and P. Zephiroff. *Compt. rend. sov. bad* 132, 352-5 (1939).—Repeated injections of aq. ext. of adrenal cortex retarded the growth of various types of cancer.

L. E. Gilson

118

ASB-31A METALLURGICAL LITERATURE CLASSIFICATION
ECON. SYMBOLICA

RECORDS DIVISION
RECORDS DIVISION

POLYMERIZATION OF VINYL MONOMERS BY P-GLUCONIC ACID AND N-DODECYLENE SULFONATE

(Comp. rend. Ser. Div. 1960, 284, 87-89) — An extract from the urine of a 4-year-old girl, probably of placental origin [cf. Abt. 1963; 23, 87], when injected during 49 days reduced the growth of young rats. A similar extract from the urine of a 2-year-old boy had no effect.

F. C. W.

A_C

ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION

180cm SYNTHESE
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BRILLSTONE
180cm BOWING
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BC A 4 Effects of plant and animal extracts on tumour growth in mice. M. Demicheli, J. Vignani and P. Zepheroff (Compt. rend. Soc. Biol. Paris, 264, 1968).--Extracts of the organs or a urinary extract of probable plant origin had variable effects on the rate of growth of spontaneous tumours in mice. P. C. W.																																																							
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PROCESSES AND PROPERTIES INDEX

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Anti-ovarian antibodies isolated from the urine of 6-year-old girl.
P. Zepherus and M. J. [unclear] [unclear] (Comm. recd. Sur.
Dial., 1948, 100, 66-70).—[unclear] [unclear] antagonizes the
action of diethylstilbestrol in immature male or female rats
but not that of oestrogen in spayed adult rats. P. C. W.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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BC CL-4 Does the rate of growth of tumours depend on a hereditary factor? N. I. Nekhorochek and I. Nekhorochek (Compt. rend., 1943, 268, 810-812).—It is unlikely that a hereditary factor is chiefly responsible for variations in the rate of growth of tumours in different strains of mice. H. G. R.																			
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Effect of the lactates of sodium and calcium on the mouse and a comparison to those of pyruvate. Nadine Dobrovoiskaya-Zavadskaya and Vladimir Monnikoff. <i>Comp. rend.</i> 224: 1638-60(1947); cf. C.A. 40, 3320, 4143. Injection of one mouse with Na lactate and 3 mice with Ca lactate produced ataxia, catalepsy, slowed respiration (without dyspnea) and progressive immobilization of the animal. No convulsions were seen as with the pyruvate. George K. Davis																			
ASB-SEA METALLURGICAL LITERATURE CLASSIFICATION SECTION 1: 1-100000 SECTION 2: 101-100000 SECTION 3: 100001-1000000 SECTION 4: 1000001-10000000 SECTION 5: 10000001-100000000 SECTION 6: 100000001-1000000000 SECTION 7: 1000000001-10000000000 SECTION 8: 10000000001-100000000000 SECTION 9: 100000000001-1000000000000 SECTION 10: 1000000000001-10000000000000 SECTION 11: 10000000000001-100000000000000 SECTION 12: 100000000000001-1000000000000000 SECTION 13: 1000000000000001-10000000000000000 SECTION 14: 10000000000000001-100000000000000000 SECTION 15: 100000000000000001-1000000000000000000 SECTION 16: 1000000000000000001-10000000000000000000 SECTION 17: 10000000000000000001-100000000000000000000 SECTION 18: 100000000000000000001-1000000000000000000000 SECTION 19: 1000000000000000000001-10000000000000000000000 SECTION 20: 10000000000000000000001-100000000000000000000000																			

CA

11G

1. Pyruvic acid syndrome in certain pulmonary diseases.
N. Dolgurovskaya-Zavatskaya and V. Momoikov. *Press*
med. ss. 780-8 (1960).—Reaction of pyruvic acid and presence
of bisulfite-binding material in the urine run parallel.
A. K. Meyer

1951

DOBROVOLSKAYA-ZAVADSKAYA, N.

①
Nervous-system manifestations of pyruvism. N. Dobrovolskaya-Zavadskaya (*Ann. Med.*, 1953, 54, 525-548).--The literature is reviewed, and the findings are reported in 8 experimental animals and 8 patients.
W. R. Berr.

DOBROVOL'SKAYA, ^{AYTSEVA} Ye. A.

Structure of media of the coronary arteries of man; macro-microscopic study.,
Uch. zap. Vt. mosk med. inst., 2, 1951.

USSR/Human and Animal Morphology - The Vascular System.

S

Abs Jour : Ref Zhur Biol., No 5, 1959, 21495
Author : Dobrovel'skaya-Zaytseva, Ye.A.
Inst : Second Moscow Medical Institute
Title : Arteries and Veins of the Corpora Quadrigemina
Orig Pub : Uch. zap. 2-y Mosk. med. in-t, 1957, 4, 68-77
Abstract : No abstract.

Card 1/1

- 6 -

DOBROVOL'SKAYA-ZAYTSEVA, Ye.A. (Moskva, ul. Chaykovskogo, d. 7/1, kv.4)

~~Some data on arteries of the medulla oblongata in man.~~ Arkh.anat.
gist. i embr. 34 no.4:95-96 J1-Ag '57. (MIRA 10:11)

1. Iz kafedry normal'noy anatomii (zav. - deystvitel'nyy chlen
AMN SSSR, prof. V.N.Ternovskiy) 2-go Moskovskogo Gosudarstvennogo
meditsinskogo instituta im. I.V.Stalina.
(MEDULLA OBLONGATA, blood supply,
arteries (Rus))

DOBROVOL'SKAYA-ZAYTSEVA, Ye.A. (Moskva, ul.Chaykovskogo, d.7, kv.4)

Innervation of arteries of the human brain. Arkh.anat.,gist. 1
embr. 36 no.6:72-76 Je '59. (MIRA 12:9)

1. Kafedra anatomii cheloveka (zav. - prof.G.F.Ivanov [deceased])
I Moskovskogo ordena Lenina meditsinskogo instituta im. I.M.
Sechenova.

(BRAIN, blood supply,
innervation of cerebral arteries (Rus))